

# Notice of Allowability

Application No.

10/602,765

Examiner

Vincent E. Kovalick

Applicant(s)

KIM ET AL.

Art Unit

2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to applicant's Request for Reconsideration dated 6/29/06.
2. ☒ The allowed claim(s) is/are 1-16 and 18-21 (re-numbered 1-20).
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All b) ☐ Some\* c) ☐ None of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Amendment***

1. This Office Action is in response to Applicant's Request for Reconsideration dated June 29, 2006.

The cancellation of claim 17, and the inclusion into independent claims 1 and 10 ,of the limitation recited in 'objected to' dependent claim 18, are sufficient to place the application in a condition for allowance.

### ***Examiner's Amendment***

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

3. Authorization for this examiner's amendment was given in a telephone interview with applicant's Attorney, Mr. Kyle J. Choi (Reg. No. 41,480), on August 7, 2006.

o Relative to claim 1, please delete (lines 6-10) and replace with:

---a timing controller for controlling polarity of the video data by supplying a selected polarity inversion signal from at least a first and second of polarity inversion signals to the data driver and controlling a timing of the data driver and the gate driver according to number of horizontal synchronization signals supplied during a data banking period, wherein the number of horizontal synchronization signals supplied during the data blanking period is an even-number of

Art Unit: 2629

times; wherein the at least first and second of the polarity inversion signals are different from each other, and the video data polarity is being controlled by the first polarity inversion signal.---

o Regarding claim 4,

line 3, following the word “generating” please delete the letter (a) and replace with ---the---

line 4, following the phrase “a first phase and”, please delete the letter (a) and replace with ---the---

o Regarding claim 10,

line 6, following the word “period;” please insert ---wherein the number of horizontal synchronization signals supplied during the data blanking period is an even number of times;---

line 8, following the word “driver” please delete (.) and insert --- , and the video data polarity is controlled by the first polarity inversion signal.---

o Regarding claim 17,

please cancel claim 17

*Allowable Subject Matter*

4. Claims 1-16 and 18-21 are allowed.

The following is an examiner’s statement of reasons for allowance:

Relative to claim 1, the major difference between the teachings of the prior art of record (USP 5,796,379, Enomoto et al.; USP 6,366,271, Kohno et al. and USP 5,270,697, Takeda) and that of the instant invention is that said prior art of record **does not teach** a timing controller for

Art Unit: 2629

controlling polarity of the video data by supplying a selected polarity inversion signal from at least a first and second of polarity inversion signals to the data driver and controlling a timing of the data driver and the gate driver according to number of horizontal synchronization signals supplied during a data banking period, wherein the number of horizontal synchronization signals supplied during the data blanking period is an even-number of times; wherein the at least first and second of the polarity inversion signals are different from each other, and the video data polarity is being controlled by the first polarity inversion signal

Regarding claim 10, the major difference between the teachings of the said prior art of record and that of the instant invention is that said prior art of record **does not teach** generating first and second polarity inversion signals different from each other according to a number of horizontal synchronization signals supplied during a data blanking period; wherein the number of horizontal synchronization signals supplied during the data blanking period is an even number of times; and controlling a polarity of the video data by supplying a selected one of the first and second polarity inversion signals to the data driver, and the data polarity is controlled by the first polarity inversion signal.

Relative to claim 20 the major difference between the teachings of the said prior art of record and that of the instant invention is that said prior art of record **does not teach** a driving apparatus comprising a determining part for providing a determining result corresponding to whether the number of the horizontal synchronization signals supplied during the data blanking period is one of an odd-number of times and an even-number of times in accordance with the number counted by the counting part; a selector for supplying one of the first and second polarity inversion signals from the polarity inversion signal generator according to the

Art Unit: 2629

determining result of the determining part to the data driver; and reset driver for generating a reset signal for resetting the polarity inversion signal generator, on a frame-by-frame basis, the detector, the counting part and the determining part.

Regarding claim 21, the major difference between the teachings of the said prior art of record and that of the instant invention is that said prior art of record **does not teach** a driving method for a LCD wherein the step of generating the first and the second polarity inversion signals different from each other according to a number of horizontal synchronization signals supplied during a data blanking period; and controlling a polarity of the video data by supplying the first and the second polarity inversion signals to the data driver, wherein the step of generating the first and the second polarity inversion signals and the step of controlling the video data polarity are reset for each frame.

### ***Response to Applicant's Remarks***

5. Applicant's remarks are rendered moot in light of the allowance of this case.

### ***Conclusion***

- 6.. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U. S. Patent No. 5,805,149 Yuki et al.

U. S. Patent No. 5,801,767 Wu

Art Unit: 2629

***To Respond***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vincent E. Kovalick whose telephone number is 571-272-7669. The examiner can normally be reached on Monday-Thursday 7:30- 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on 571-272-7681. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Vincent E. Kovalick  
August 7, 2006



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